

Reality Inspired Games: Expanding the Lens of Games' Claims to Authenticity

Robyn McMillan, Darshana Jayemanne, Iain Donald

School of Design and Informatics, Division of Games and Arts

University of Abertay

Bell Street, Dundee DD1 1HG

+44 1382 308000

robynajmcmillan@gmail.com

d.jayemanne@abertay.ac.uk

i.donald@abertay.ac.uk

ABSTRACT

This paper considers the potentials of contemporary games staking claims to realism through documentary and journalistic techniques as part of a wide-ranging cultural and technological phenomenon— 'Reality Inspired Games' or RIGs (Maurin, 2018). We argue that RIGs employ design techniques and strategies of legitimation that are valuable to the reactive development cycles in the indie sector, whilst also being beneficial for academic research and development. Through examining traditional documentary and the concept of Bruzzi's performative documentary (2006) we highlight how this concept may allow developers to negotiate performativity and authenticity in their videogames.

We discuss examples of such games in the realm of indie productions, such as *That Dragon, Cancer* (2016), *This War of Mine* (2014), and *My Child Lebensborn* (2018) and *Bury Me, My Love* (2017). All of which represent new ground for game design, documentary and journalistic techniques that have influenced our work on the MacMillan project.

Keywords

Reality Inspired Games, Documentary, Performativity, Indie

"Much like photographs, paintings, literature and music are capable of transmitting the full range of the human experience from one human to another, so too can games. Due to their interactivity, games are capable of a higher form of communication, one which actively engages the participant and makes them a part of the experience rather than a passive observer" (Brathwaite & Sharp, 2010, p315).

INTRODUCTION

This paper explores how contemporary games are making claims to realism through the lens of 'Reality-Inspired Games', traditional documentary and the concept of Bruzzi's *performative documentary* (2006) in videogames. 'Reality- Inspired Games' or RIGs is a term suggested by game developer and journalist Florent Maurin, one of the creators of *Bury Me, My Love* (The Pixel Hunt, 2017). Maurin argues that RIGs go back at least to *The Oregon Trail* (MECC,1985) but are also increasingly prominent in contemporary game design. Examples can mostly be found in the realm of indie productions, including games such as *That Dragon, Cancer* (Numinous Games, 2016), *This War of Mine* (11 bit Studios, 2014), and *My Child Lebensborn* (Teknopilot, 2018). Maurin's argument comes at a time when the video games industry has had an increasingly significant effect on the global cultural phenomena,

Proceedings of DiGRA 2020

© 2020 Authors & Digital Games Research Association DiGRA. Personal and educational classroom use of this paper is allowed, commercial use requires specific permission from the author.

with the current number of people engaging with games around 2.6 billion worldwide (ESA, 2018). The link between videogames and learning is of broad and continuing interest, and the history of games is marked with periods of utilising gameplay for learning and conveying experience (Rice, 2007).

The existing research exploring realism in games which has sought to problematise the idea of reality includes Kristian Bjørkelo's discussion of transgressive realism for promoting meaningful experiences, in which "transgression may reaffirm the boundaries that have been transgressed and further our understanding of them" (2018). Alexander Galloway's contention of games as a "third phase for realism". The first two phases are realism in narrative (literature) and realism in images (painting, photography, film). Now there is also realism in "action" (2004). As well as Holger Pötzsch's 'selective realism' which conceptualises how generic narratives and game mechanics selectively exclude negative experiences of play that avoid difficult ethical decisions in ambiguous moral scenarios (2015).

However, in this paper we draw on the potential of journalistic techniques in design to stake claims to reality. Moreover, we advocate for the maturity and depth of exploration of issues and themes in games that are currently being explored in other media, even though the ratings classifications of the *British Board of Film Classification* (BBFC) and *Video Standards Council Rating Board* (VSC) are aligned. Although AAA studios often promote 'realism' as a key selling point for their games, the constraints of lengthy development cycles, sales targets, and strict rules from publishers means that they fall short of providing meaningful commentary to issues they pose in games. The player-centric development of AAA games has contributed to wider cultural conceptions of videogames as shallow, violent, and hedonistic. Roger Ebert, for example, contended that videogames are not an art form and that no games are worthy of comparison with poets, novelists and filmmakers (Ebert 2010; Parker 2018). For Ebert, a key difference between art and games is that you can 'win' a game in the sense that it has rules, points, objectives and outcomes. RIG's characteristic decentering of the figure of the player is one way in which they address these critiques.

Conversely, RIG indie games provide more opportunity for experimentation and their shorter development cycles means that they can be more reactive to ongoing issues. Furthermore, they negotiate performativity and authenticity as to what and how stories are told. Like documentaries, they can persuade, move, and challenge us, and create the groundwork for future research. Hence, the exploration of games that focus less on player-centrism and more on empathy, retrospection and challenging societal issues. RIGs represent a dovetailing of game design, documentary, and journalistic techniques.

REALITY INSPIRED GAMES

How might you inject 'reality' into a video game, thus constituting a 'reality-inspired game'? After all, games are often marketed as a form of escapism, and there are many claims to reality (virtual, alternative, mixed) and realism (photorealism, surround-sound, haptics, simulation) that the games industry likes to use to market its wares. Given the remarkable purchase that such claims to reality have in the games industry, what issues arise when developers strive to incorporate other realist claims and strategies in their work? In this paper, we explore the issues raised by what developer Florent Maurin, the developer of the game *Bury Me, My Love* (*BMML*), has termed 'Reality-Inspired Games' (RIGs). Where for Maurin, these constitute a genre that is distinct from closely aligned serious- or newsgames, here we re-interpret RIGs as a heuristic through which to track emerging techniques through which digital games

have documented, represented, critiqued, and played with reality: emphasising, within games, the elements that Bruzzi (2006) has termed the ‘performative’ aspect of documentary.

Maurin outlines a schema for RIG’s with five main propositions:

- “They make a direct reference to the real world
- They describe the world through a credible model of its mechanics...
- They allow the player to manipulate this model, and thus to see things through an unusual perspective...
- They differ from reality insofar as they allow for non-permanent consequence, thereby encouraging the player to fail and try again – and get better...
- What we learn in those games sticks with us as real human beings” (Maurin, 2016).

BMML achieves these goals through its unique design. The game is based on the true accounts of Syrian refugees who fled their homes because of the ongoing brutal civil war. The game was developed on the Ink Unity Plug-In and the gameplay itself remediates the way migrants communicate via smartphones, reminiscent to the communication App *Whatsapp* (Whatsapp Inc, 2009). Players follow the narrative of a married couple, Nour and Majd. Majd stays behind at home in Homs, a city in Syria to look after their family. On the other hand, Nour sets off to try and make her way to Germany to resettle in safety so that her husband can join her later.

A key element of Maurin’s RIG schema is that he describes the process of being ‘inspired’ by reality not just in terms of journalism, but also of game design (Jayemanne, 2019). *BMML* is inspired by the story of Dana, a young Syrian who had sought refuge in Europe - but Maurin also talks about his inspiration from indie games such as *Cibele* (Freeman, 2015) which draw on social media for aesthetic and interface design. *BMML* incorporates both indie game design techniques and novel new media techniques in journalism: Maurin first read about Dana’s story in an article in the French newspaper *Le Monde*. Journalist Lucie Soullier compiled over two hundred and fifty screenshots of messages Dana sent and received from her Syrian loved ones during her harrowing journey to Germany. The Pixel Hunt also interviewed other refugees as well to incorporate multiple tales into the game design. The story, including all the different branching paths, amounts to 110,000 words, and Maurin says that Dana read through everything and corrected the details. (Maurin, 2018, 2019).

This gives some context to what is at stake in Maurin’s idea of the RIG, but questions remain: aren’t all games, in some way, inspired by ‘reality’? If we took a game like *Call of Duty: Modern Warfare* (2019), from these premises alone it appears that such a title would pass this schema, however its claims to realism are ultimately undermined by certain design decisions that are counterintuitive with the reality they are trying to portray. Here we are less interested in arguing for the RIG as a generic classification than tracing how the concept of the RIG can help us widen the lens on the ways that contemporary videogames are making claims to realism.

REALITY INSPIRED MEDIA AND DOCUMENTARY

The widened lens offered by the RIG in a game context reflects the diversity of inspirations, techniques, and approaches characteristic of documentary media more generally. Books, poetry, television, and film are all capable of transmitting the reality of the lived experiences of others. Documentaries have often made moral points (such as documenting war to advocate for its avoidance). At other times, documentarians use satire to find humanity and meaning of some of the darkest moments in history. Media is interspersed with accounts of living history through the lens of individuals such as Wilfred Owen's *Dulce et Decorum est* (1920), Charlie Chaplin's *The Great Dictator* (1940), Michael Moore's *Bowling for Columbine* (2002) and Keith Maitland's *Tower* (2016). All of these aim to tell us something about individuals' perception about the world we live in. Owen's poem, published posthumously, is known for its detailed account of the effects of chlorine gas and subsequent condemnation of war, whereas Chaplin's film is a political satire-drama that served as a condemnation of Nazism. Arguably, these works explore the boundaries of fiction and non-fiction in a similar way to those who endeavour to make documentary films. This point has been argued by Pittner and Donald (2018) who trace lineages of documentary and critique across Conrad's *Heart of Darkness* (1998), Coppola's *Apocalypse Now* (1979) and finally the videogame *Spec Ops: The Line* (2012).

On the other hand, the same documentary media can be used, "to give the impression of authenticity to what has actually been fabricated or constructed" (Nichols, 2001), and therefore the interpretation and meaning of what we see can be called into question. The documentary effect in media and television can be strong enough to create 'reality-effects' (Barthes, 1989), which are operative even when the claims to reality are false or misleading. 'Reality TV' shows such as *Big Brother UK* (2000-2018), *Wife Swap UK* (2003-2017) and *Love Island UK* (2015-2019) became part of popular media, alongside successful 'mockumentary' films like *The Blair Witch Project* (1999) and *What We Do In the Shadows* (2014) that maintained documentary realism whilst being theatrical in their pursuits.

If the style is intended to only add flavour to the narrative but makes no 'genuine' claims to its authenticity, then there are no ethical issues. However, where claims are being made, falsified or details omitted can raise issues of journalistic integrity. Disney's *White Wilderness* can be credited with the largest nature hoax of all time. The misconception of lemming "mass suicide", in which the scenes "shown in the documentary were staged by filmmakers in order to replicate supposed real-life behaviour of lemmings that could not be captured on film" (Mikkelsen, 1996). Ultimately this led to the perpetuation of the idea in wider culture with the phrase 'don't be a lemming' as well as being an inspiration for a popular videogame (Plante, 2016).

Bill Nichols argues that the progression of documentary films follows a moderately chronological progression from the 1930s to the present day: evolving from expository, to observational, interactive, and reflexive documentary techniques. Nichols' influence has been felt in game studies primarily through discussions of newsgaming (Bogost et al., 2010). However, less commonly noted in game studies is the critique of Nichols by Stella Bruzzi, who has argued against Nichol's linear account. She also adds another style called '*performative*' documentary, which aims to utilise "performance within a non-fiction context to draw attention to the impossibilities of authentic documentary representations" (Bruzzi, 2006, 185).

For Bruzzi, traditional documentaries aimed to present the subject matter as 'faithfully' as possible, and with this came the presumption "that the production

process must be disguised” (2006, 186). The risk of aiming to represent reality as faithfully as possible is that it often entails downplaying storytelling technique (this is reminiscent of debates around realism and formalism in film studies). With performative documentary however, artistic technique is not downplayed but rather utilised persuasively. For example, the omission of certain voices can be used to empower others. Maitland’s *Tower* is a vibrant documentary that exemplifies the above by telling the story of the University of Texas Sniper attack in 1966. The creative flare of the documentary stems from the use of rotoscoping animation of archival TV news, radio reports and accounts of victims, onlookers, and law enforcement. All of which serve to recreate a sweltering August afternoon in Austin when a relatively peaceful day was cut short by Charles Whitman, the gunman who climbed up the main campus building known as the Tower.

Even though it is a work of historical narrative, which is largely underpinned by the living history of people who witnessed that day, *Tower* disregards a key part of the story: Whitman himself. Despite it marking the beginning of an ongoing and deeply troubling period of school shootings and attacks in public spaces in the US, the intentional absence of Whitman was no mistake. Rather than focusing on the sociological impact of mass shootings in the US like *Bowling for Columbine* did, it instead was intended to “honor those who survived and the lawmen who shot the killer” (Stuever, 2017). It also marks a time where the media is now less inclined to name the perpetrator owing to the news previously covering these events in such a way that the “entertainment form and logic of mass mediated news provides the inspiration and fuel for later killings” (Murray, 2017). While “Columbine set the precedent for how the media covers school shootings... Sandy Hook illustrates a departure from this” (Schildkraut and Muschert, 2013). Thus, *Tower* makes an ethical commitment as a voice for the victims who often aren’t at the forefront of our minds but remains in the documentary mode.

Depictions of ‘reality’ (both fictitious and authentic representations of the world we live in), have been conveyed in numerous ways in traditional media. When developing a creative work, there are ethical responsibilities that must be adhered to for content that is marketed, read, displayed, or viewed in popular culture. Still, this has not staggered the depth of exploration of sociological or historical issues in film, television, and novels. On the other hand, while sharing an aligned ratings system (see BBFC, VSC), games do not share the same level of maturity or realism that other forms of media benefit from. Why is this?

CONSTRAINTS OF AAA TITLES

What is noticeable in Maurin’s RIGs and Bogost et al.’s newsgames is their indie provenance. What is it that prevents the AAA industry from producing more RIGs, given that successful studios and franchises often push realism as a selling point for their titles? There are many AAA studios that use ‘reality’ as a selling point for their games. From realistic graphics in *Red Dead Redemption 2* (Rockstar Studios, 2018), *The Last of Us* Franchise (Naughty Dog, 2014-2020), and *Death Stranding* (Kojima Productions, 2019) to those that try to emulate reality in games such as *Fifa Franchise* (1993-2019) and *Call of Duty: Modern Warfare* (Infinity Ward, 2019).

Fifa dominates the world of sports-based games and EA strive to make the game look and feel as realistic as possible. Even though they make a direct reference to the real world, with the inclusion of high-profile players such as Cristiano Ronaldo (EA, 2018). The annual cycle of sports games like *Fifa* leaves developers struggling to promote new features to keep each yearly release fresh and engaging. As a result, “new features... take over and dictate how the game has to be played” (Durant, 2019). Furthermore, some characteristic performances are not included in the game:

Fifa does not allow players to argue with each other or the referees, something that is commonplace in the real world. Moreover, EA suffered a loss for the first time in 25 years with Konami acquiring the rights to some of the world's major teams like Juventus for *Pro Evolution Soccer* (Musa, 2019): fictionalised teams became part of the narrative of the game. Another example of how reality clashes with the development cycle characteristic of AAA games, is the effect of the recent banning of Russia from international competition and its manifestation in the game design and narratives of future sports games (BBC, 2019).

Similarly, the marketing of AAA military games often emphasises specific notions of realism. A recent example is *Call of Duty: Modern Warfare* (2019). Infinity Ward Narrative Director Taylor Kurosaki posed the question, "What do the words 'Modern Warfare' mean in 2019?" (cited in Takahashi, 2019). He also highlighted that the studio worked very closely with military consultants, cultural consultants, the CIA, Middle Eastern Correspondents, as well as other military personnel such as the marine corps, to highlight how 'the world' and the nature of combat have necessitated new design approaches since the release of *Call of Duty 4: Modern Warfare* (2007). Kurosaki states, "The situation is more complex than it's ever been... it's now enemies who purposefully try to blend in with civilian populations. The battlefield is not a defined area anymore. It can be anywhere at any time" (cited in Takahashi, 2019).

What has resulted from the subsequent research and development is a game which makes significant claims to represent the complexities of war in the 21st century including torture, child combatants, and chemical weapons. The result is a game that incorporates warfare or acts of terror that we may observe on the news and social media. The game opens with a terrorist propaganda video playing, before panning to a van full of terrorists. The van arrives and men with guns run out into a crowded urban space, whilst one, "with a bomb strapped to his chest strides out... detonator in hand" (Rivera, 2019). This is just the beginning of a number of distressing and intense situations throughout the game including waterboarding, playing as a child in a war zone, and a house raid. Like film and television, games can be created to invoke shock and awe in its viewers; to demand attention from their audiences and have them actively participate in acts that would be unethical. It is also a way for us to challenge our moral reasoning when navigating such scenarios.

The 'realism' enshrined in the game has been met with praise and criticism, on the one hand it is, "one of the best campaigns... filled with complicated politics, quiet setups, and brutal moments of violence" (Kuchera, 2019). On the other hand, some reviewers felt like they had taken things too far, and that they felt "more than uncomfortable" (Takahashi 2019). However, Infinity Ward leaders said that it is designed to make players uncomfortable and to prompt introspection. They argue, "the violence isn't gratuitous. It's contextual, fitting for the story and the artistic themes of the game about where soldiers have to draw the line in modern warfare" (Takahashi, 2019). The claim that the violence, 'isn't gratuitous' clearly pushes back against the accusation of triviality levelled by critics such as Ebert.

Arguably this AAA game can be considered a RIG as it researched the relevant groups in order to incorporate themes into a model that explores modern warfare. The game itself, however, is still heavily focused on player-centrism and creating an environment that falls short of encouraging players to explore the hardest questions. Infinity Ward and Activision themselves have drawn the line at certain acts that can be viewed or committed in the games, namely chemical weapons and shooting babies. Whilst the vast majority of people would agree that such things are horrific, it seems to be counter-intuitive with their narrative of contextualising and drawing light on

such violence. The challenges of having demanding themes is providing a compelling reason for including them. In the mission, “*Clean House*”, the player is confronted with a mother running towards a cot and cradling her baby. If the player shoots the baby, they fail the mission and you are met with a screen that stipulates that children are ‘non-combatants’ (2019). This conflicts with a scene in which the player undertakes the role of a frightened child and is subsequently forced into direct combat with a soldier.

In addition to the lengthy development cycles that preclude response to punctual events, then, the “*Clean House*” mission exemplifies the conservatism inherent in AAA documentary claims. If we are to find context and meaning in such events, we should not be shying away from the fact that children are often victims of war. On the 26th of October a US raid to a compound to eliminate Isis lead Abu Bakr al-Baghdadi took place, and despite him detonating a suicide vest which killed two of his children (BBC, 2019), the mission was declared a success. Collateral damage is part of war, but for EA and Infinity Ward, this is an unthinkable act for a UK soldier represented as protagonist and player character in AAA gaming. The moral and narrative outrage coincides with a designed fail state.

AUTHENTICITY IN INDIE GAMES

The constraints characteristic of AAA - invoking while also shying away from realism - have coloured wider cultural perceptions of all videogames. As noted, videogames have often been characterised as a form of entertainment that is shallow and preoccupied with adolescent fantasies. Conversely, many games but more specifically, RIGs, are not focused on the hedonistic notion that a game is something to be ‘won’; rather they focus on communicating ideas and social messages through literary devices (characters, narrative, dialogue) and player interaction with the virtual world (Brown v. Entertainment Merchants Ass’n, 2011). This entails making performative experimentation a part of the game’s privileged relation to reality while also opening up games to forms of documentary subjectivity that exceed the presumptions of journalism, making RIGs a game design variety of Bruzzi’s performative documentary.

RIGs, like documentaries, can persuade and challenge our views of the world. Whilst AAA studios push the idea of realism, these games are constrained by lengthy development periods and having to adhere to strict rules by publishers as well as the games orientation being player-centric in order to sell. If they are to mature as a media, they must be able to explore all subject matters. Although, as with any media, it is important how the given topic is contextualised. Bruzzi’s ‘*performative*’ documentary, in a game context could be paraphrased as: “performance within a non-fiction context to draw attention to the impossibilities and *expand the possibilities* of AAA and normative game design tropes”.

Indie games have created a space with increased latitude for RIG experimentation, although this often involves the increased risk and precarity that scholars such as Whitson, Simon, and Parker (2018) have registered by bringing cultural studies concepts such as ‘cultural entrepreneurship’ and ‘relational labour’ (Baym 2015) into game production studies. Such games and their interactivity may possess the ability to, “address individuals’ needs for greater insight and meaning in ways that meet or even surpass their less interactive peers, such as TV and film” (Bowman, et. al. 2015).

By their nature, RIGs adopt a journalistic approach in their design be it interviewing participants, documenting living history or researching chosen subject matters. There is considerable overlap here with the concept of Newsgames, a genre that stakes claim to reality and typically comes in the form of *current event*, *infographic* and *documentary* games. Newsgames follows from Bogost’s description of procedural

rhetoric, meaning, “the practice of using processes persuasively” (2007, 3) or “the way that a videogame embodies ideology in its computational structure” (Bogost, 2006). Accordingly, this shapes the idea of rhetoric in newsgames that helps us consider how games can educate and hold journalistic values. Both current event and infographic style games are typically developed in short cycles; current event games are, “usually embedded in Web sites, used to convey small bits of news information or opinion” (Bogost et al., 2010, 13), whereas infographic games, “help players distinguish data from information” (Bogost et al., 2010, 60). The former styles are typically more reactive to ongoing events in the world. With their focus on developing events and recognition by journalistic institutions, such games cover isolated events in a brief and understandable way.

A paradigmatic example is *September 12th* (2003), a historical game that takes place in the Middle East and is about the, “futility of the US-led War on Terror. Created by a team of Uruguayan game developers led by a former CNN journalist” (Frasca, n.d.). The game’s message is the maxim, “violence begets violence” (Frasca, n.d.). Villagers that start out as ‘neutral’ will inevitably become ‘hostile’. “For every ‘terrorist’ you kill, several more pop up in his place” (Ehrentraut, 2013). However, there are already issues with the concept of the newsgame: it is arguable that *September 12th* is not a bite-size commentary on how the U.S. reacted to September 11 so much as a general response to Western foreign policy writ large. On the other hand, Documentary games focus on events, “after they have taken place” (Bogost et al., 2010, 152). Documentary games typically consist of a larger scale development cycle, whilst also typically being longer and more detailed. Bogost et al. highlight that visual realism is not necessary to portray the reality of an incident or situation (2010, 62).

From this brief outline of key newsgames, it is apparent how this concept may be ancillary to the notion of RIGs. In a RIG such as *BMML*, the design does not ratify ‘news’ through game design so much as to incorporate a view of reality as a provocation for experimenting with game design. Even a key newsgame example, such as *September 12*, contains semiotic and philosophical inspirations that exceed the concept of ‘news’: it is also indictment and condemnation. Documentary games certainly have the potential to go into more depth as simulations. However, as Maurin highlights, such games often contain linear narratives and they are for the most part “‘non-fiction’ in which the author nonetheless subjectively describes the situation” (2016). RIGs seek to invoke meaningful play by carefully reconsidering gaming’s orientation to player-centrism; it should be responsive by design to the group or individual it is intentionally designed for. Rather than creating snapshots from particular events during a particular time, RIGs more generally focus on issues that derive from living history, namely the themes that could be applicable across various space and times. Similar to documentaries, as RIGs use genuine stories and inspiration, they can serve as “cultural snapshots: they capture beliefs from a particular time and place and offer ways to understand what a given group of people believes and values” (Flanagan & Nissenbaum 2014, 3). Thus, RIGs allow players to role-play and view things from new perspectives and enact decisions not as wish-fulfilment but as a spur to self-reflection.

This is something that we contend is important to many of the games that Maurin identifies as RIGs: the game is not about player empowerment, but rather the focus is on specific characters, and their experiences. The increasing cultural (if not commercial) prevalence of RIGs such as *BMML*, enjoin us to reconsider just what it means for a game to stake a claim to reality. Similarly, the game design techniques through which *BMML* realises its inspirations from reality exceed the range of journalistic reportage. The game has a colourful comic-book style rather than

attempting sober documentarian photorealist graphics that may be considered more appropriate to the subject matter, maintaining artistic integrity in a similar way to Maitland's *Tower*. The game's design also represents an attempt to overcome the typical escapist, triumphalist, or heroic themes so common to the form: an 'aesthetics of infelicity' (Jayemanne, 2017) which pushes back against player empowerment models of game design and hence prompts them to re-explore the possibility space and discover other perspectives and stories. In this way, the game prompts players to explore many refugee stories, encapsulated within the framework of Nour's journey and Majd's role as anxious player character.

As with Bruzzi's notion of performative documentary, RIGs represent an expansion of aesthetic, design and production techniques with respect to both mainstream game development and newsgames. This expansion facilitates the treatment of new themes and subjects within videogames. While all games could be considered 'performative' in one sense or another (Jayemanne, 2017), RIGs such as *Cibele* and *BMML* utilise innovations in the structure of game performance to decenter the player and connect them in new ways to the realities by which they are inspired. Ultimately, the RIG is a bit of a fuzzy set: not a set of design prescriptions which would once and for all secure the relation between games and reality or seriousness. Instead, each RIG stakes a claim about reality which informs its experimental approach to design strategy.

WAR GAMES AND THE REALITY OF WAR

This can be explored further by continuing the example of military games. Games such as *America's Army* (United States Army, 2002) and *Full Spectrum Warrior* (Pandemic Studios, 2004) have been funded by or commissioned by the military and received largely without issue by the public. Others, for example *Endgame: Syria* (GameTheNews, 2012) or *Six Days in Fallujah* (Atomic Games, n.d.), have found their path to release blocked by platform policies, public concern, and political outcry. The popularity of military-themed shooters has ensured a steady stream of released games, but games developers have largely eschewed the more complex narratives and nuanced gameplay in favour of frantic action, deathmatches, and kill-steaks. However, even where games have attempted to reflect real events entertaining gameplay often conflicts or trumps the historical and narrative accuracy as 'gamer mode' (Frank, 2011). One that does and that he cites as an influence is *This War of Mine* (2014).

This War of Mine

This War of Mine was developed by 11 bit studios based in Warsaw, Poland from 2012 and released in 2014. The game is a survival strategy where the player undertakes the control of a house and its occupants during the siege of an unnamed city. The developers describe the motivation to create, "a game that had a potential to touch people. A game that could matter. Something, that hasn't been done before. A thing to be played and discussed for years to come." ("About Us – 11 Bit Studios", 2019). The game was both a critical and commercial success, and to date has garnered over 100 awards. Success would normally encourage other games to emerge and it is worth considering why this hasn't happened.

Although *This War of Mine* is set in a fictional central European city, the developers have repeatedly cited as being influenced by both the 1992–96 Siege of Sarajevo during the Bosnian War (Rose, 2014, Totilo 2014) and their own city's history of the 1944 Warsaw Uprising where the Polish Home Army held out for 63 days before being overwhelmed by Nazis (Crawley 2014, Hall 2014). Similarities were drawn with Aleppo but the reason to fictionalise the setting was a design decision as the developers didn't want people thinking of the game in a certain city, they wanted

players to believe it “could happen to your country, your city, anywhere” (Totilo, 2014).

Gameplay is focused around maintaining both the mental and physical health of a group of unarmed civilians who must scavenge, fight, or barter for food, medicine and other supplies, whilst trying to balance the character’s sleep, hunger, and morale against external threats (Meer, 2014). The game is challenging, and the player must consider whether to undertake immoral and unimaginable actions in order to make the game easier (de Smale, Kors and Sandoval, 2017). Like Brenda Braithwaite’s *Train* (Romero, 2018), *This War of Mine* is a game that pushes the boundaries of what is considered entertainment and through its game mechanics makes the player think about a morally difficult subject. What would you be prepared to do to survive? It is a brutal and relentless look at war that not everyone wants to see (Sheehan, 2017).

In 2016 a DLC pack entitled *The Little Ones* was released. This was another departure from most war games – by introducing a realism that is frequently avoided in war games with the introduction of children into the scenarios (Kępa, 2016). That said the developers maintained a distance so although children impact upon the gameplay they don’t die. Instead if they are in a situation which would typically result in an adult character dying, the player is messaged that the child has left the shelter. The team have argued that they wanted the player to be unaware of the child’s fate “rather than shock them by making death as explicit as with the adult characters” (Webber, 2016). To include mechanics that allow the death of children in the game world would require careful contextualisation of the issue and would need to be acknowledged like it is in other media.

Arguably the reason *This War of Mine* resonates is that the subject matter focuses on roles that aren’t fantastical or invincible. Telling the story of a war from a different perspective, initially that of a civilian’s and, through the DLC, that of children. Much as other media have drawn audiences to feel a relief, sadness or catharsis (Diver, 2016), *This War of Mine* also taps into the growing awareness of the ongoing geopolitical situation. The influences of the game may initially have been Warsaw in 1944 and Bosnia in 1992-96 but they connect directly to the war in Syria, and the sieges of Homs and Aleppo. The gameplay may have focused on questioning each player as to whether they think they could survive a conflict but the human real world connection, knowing that this was happening in the world in the present day, meant that the fiction was loaded with reverence and moral dilemmas. The game also serves to explore how games can be utilised through the application of different memory models, suggesting that the act of making and playing can support healing post conflict (Bull and Hansen, 2016). In a similar way that documentaries were once a novel way of teaching new audiences something about the world, videogames are tapping into a new era where a significant cultural shift in how younger generations will learn about geopolitical issues is forming. Mateusz Morawiecki stated that Poland will become, “the first country in the world that puts its own computer game into the education ministry’s reading list” (Tilles, 2020).

My Child Lebensborn

Another game that focuses directly on the impact of war is *My Child Lebensborn* (Teknopilot, 2017). The silent suffering endured by the children of Lebensborn stories were cast into the light in the noughties, when a “group of 154 Norwegians, along with four Swedes and a German... turned to the European court of human rights, arguing that the Norwegian government’s inaction to protect them violated their civil liberties” (Associated Press Strasbourg, 2007) Subsequently drawing the attention of Elin Festøy, who worked in journalism and communications for over a decade before entering the realm of documentary making. Having been deeply moved by their

stories, Festøy reasons that although a, “tried and trusted medium of lighting up history’s darkest moments... she believed a documentary just wouldn’t do for this kind of story” (Harris, 2018). Drawing analogies to Maitland’s Tower, it appeals to the concepts of performativity and aspires to draw in new audiences whilst also driving direct action through gameplay, rather than passivity.

Undeniably staking its claim in reality, the game navigates the reimagined stories of the Lebensborn and Children born of war (Festøy, 2017). Exploring the persecution and isolation of a child of war in Norway 1951, you play as an adoptive parent of a girl or boy who is preparing for school. The child is predominantly excited to start school and make friends, but this childlike hope and zest for life are systematically diminished as she is ostracised by her friends, classmates, teachers, family and society in the game’s heart-rending theme (Parkin, 2018). Subsequently they struggle to maintain healthy relationships with others, as a result of having an identity born from fear and hatred forced on them. It explores the complexities of bullying and the difficulties of dealing with sociological structures that don’t protect the vulnerable in society.

The mechanics are relatively simple between managing time at home or working in the factory. It takes place using a rudimentary budget system to distribute it amongst meals, toys and essentials for the child. Whilst also balancing time for baths, playing outdoors, clothes mending and patching cuts and bruises in a daily cycle, trying to ensure they are as content as possible (Campbell, 2018). However, as a “story driven nurture game” (Teknopilot, 2018) the most meaningful interaction is the dialogue between you and the child. Imparting advice on coping with bullies, revising and why they are treated in such a cruel manner by others, as well as key decisions, such as contacting her birth family or attending Norway’s constitutional day. Ultimately after being met with relentless hostility the child transforms from being joyful, driven and curious to morose and wary.

The accounts of these children’s experiences break down the idealism of us vs. them in a way that confronts the actions of our societies today. With the babies of Boko Haram being shunned and not allowed to remain with their mothers (Searcey, 2018), and the children of Isis who have been abandoned by governments (Moaveni, 2019), *My Child Lebensborn* sheds light on the consequences of children paying for the sins of parents and questions the protection obligations that societies have for some of the world’s most vulnerable youths.

The scope of RIGs is not limited to wargames. Like documentaries, they are capable of covering the depth of the human experience on a broad range of topics, While attention to violence and the consequences of war appear to capture people’s interest in games, there is still a host of untapped opportunities and potential of a wealth of issues that could be explored. One such game that was met with an encouraging reception was *That Dragon Cancer*.

“THAT DRAGON, CANCER” AND THE HUMAN EXPERIENCE

Death happens in the majority of video games but rather than being a focal point for reflection; most games “cloak death in hit points, energy bars and infinite respawns – death is reduced to a gameplay mechanic, a thing that can, with skill, be avoided or defeated” (Machkoveck, 2016). On the other hand, *That Dragon, Cancer*, developed by Numinous Games confronts and reflects on death. The autobiographical game serves as a grieving parent’s homage to their son Joel and invites us, the players, to share their journey of losing a child to terminal cancer.

What is perhaps one of the most unique and interesting aspects of performativity in *That Dragon Cancer* is that alongside the development of the game, Ryan Green enrolled the help of his wife and children to document their journey for the documentary film *Thank you for Playing* (2015). Both serve to explore the boundaries of creating an authentic representation through a performative lens. From the re-enactment of painful conversations, meticulously capturing details of the hospital and recording Joel's lovely little giggle, all while continuing to care for him. Both outputs serve a means of exploring both real and virtual worlds and how we can process grief through technology in the 21st century, and the implications of capturing profound human experience through the medium of games (Eilon, 2018). Exceeding journalism in its techniques for establishing a link to reality, and its power as a creative work as the narration and play guides the player through fourteen chapters. In this sense the linear narrative is one part of the game that becomes the building block of their experience. The game itself has a retro feel, with simple yet effective abstract environments that works harmoniously with the games system and the Green's observations and experiences throughout Joel's cancer journey. By adopting a credible model of mechanics, they successfully utilise the game mechanics to express their specific take on things (Rusch, 2009), that captures both the severity and gravity of the situation whilst also acknowledging that playfulness and joy that comes with parenting a child.

Traditionally players have stepped into the role of the protagonist (or antagonist) within a gamespace, in a sense they are often omnipotent and in control over large aspects of the game including how we are seen. On the other hand, games like *That Dragon Cancer* have to negotiate performativity in their own right as to how stories are told and subsequently played through an autobiographical lens. Crowdfunded and played by people "being willing to stop and listen and not turn away" (Green cited in Campbell, 2016) from the Green family's journey, the normality of the characters in such games allow us to connect with them on a more human level. Moreover, contrary to Eberts' supposition the game isn't driven by "success or failure – which makes sense in this game's case, since it's never the player's fault if something bad happens to Joel" (Machkovech, 2016).

The game resonates with its audience as it also serves as an, "immersive adventure game to inspire others; and a memorial for hundreds who have fought cancer" (cited in Dorn, 2015). As a disease that affects millions worldwide, cancer is an issue that most people are directly or indirectly impacted by at some point in their lives. As such, we aim to adopt these emerging techniques and utilise the performative aspects of games for research and developing games that focus on capturing authentic and meaningful representations of what it means to live with cancer.

CONCLUSION

The post-millennial years have seen the performative aspects become somewhat commonplace. Technological advancements have created a "sustained interest in subjects whose lives seem built around layers of performance" (Bruzzi, 2006, 222). Consequently, the reach of games like *That Dragon, Cancer* and other indie RIGs like *Bury Me, My Love*, *This War of Mine*, and *My Child Lebensborn* demonstrates that even the most challenging subject matters can be contextualised and developed to create engaging and meaningful experiences. AAA may be constrained by the pressure to appease publishers and meet sales targets. However, the indie sector provides an opportunity to mature games as a media and design games that explore untapped concepts and issues that are freely explored in traditional media, with some current examples even finding commercial success in this space. In this paper we have explored how Maurin's concept of the RIG challenges traditional ideas of documentary and certain game studies concepts such as the 'newsgame' by prompting

us to think of the expanded repertoire of techniques by which games are appealing to reality. RIGs do more than express journalistic values and convey events, they also stake strong claims in reality as part of negotiating performativity in play.

This work suggests that RIGs are an ongoing provocation for contemporary cultural works as they respond to political and environmental crisis through an expanded set of design techniques. These games are also worth consideration for research (in particular, practice-based research). A project currently under development by the authors of this paper deals with the question of, ‘what it means to live with cancer’, and the potential utility of game design techniques in this space. Current research highlights that a significant proportion of patients will experience a broad range of distressing and long-term problems and that the cost of a cure can also have detrimental and unforeseen side-effects (MacMillan, 2013). Utilising methods such as co-design with patients within the cancer patient community, we anticipate that through providing an output where they can share their experiences and apply their testimonies into a gamespace, we can obtain the key values and events that reflects their day-to-day reality which goes beyond journalistic values but they share a common theme.

Performative documentary in a game context highlights utilising techniques in non-fiction works to use games as a cultural tool, while the concept of the RIG can provide some guidance for this fraught process of design, being responsive to the issues, people or subjects it endeavours to capture in the game. All of which serve as an appropriate approach to developing authentic representations of reality while also maintaining a level of creative flare that captures the attention of players and creates a lasting impact.

BIBLIOGRAPHY

11 bit studios. 2014. *This War of Mine* [PC]. Warsaw, Poland: Author

2K Games. 2012. *Spec Ops: The Line* [Xbox 360]. Berlin, Germany: Yager Development.

"About Us – 11 Bit Studios". 2019. 11Bitstudios.Com. Accessed February 11. <http://www.11bitstudios.com/about-us/>.

Activision. 2007. *Call of Duty 4: Modern Warfare*. [Xbox 360]. Santa Monica, CA: Infinity Ward, Sledgehammer Games, Treyarch.

Activision. 2019. *Call of Duty: Modern Warfare*. [PS4]. Santa Monica, CA: Infinity Ward, Raven Software, High Moon Studios, Beenox

Associated Press Strasbourg, 2007. "Norway's Aryan Children Go To Court Over Years Of Prejudice". *The Guardian*.
<https://www.theguardian.com/world/2007/mar/08/secondworldwar.international>

Auroch Digital. 2012. *Endgame: Syria* [Android]. Bristol, United Kingdom: GameTheNews.

Barlow, S. 2016. *Her Story*. [PC].

Barthes, Roland. 1989. *The Rustle of Language*, Berkeley: University of California Press

BBC, 2019. "Abu Bakr al-Baghdadi: What we know about US raid in Syria". <https://www.bbc.co.uk/news/world-middle-east-50200703>

BBC, 2019. "Russia banned for four years to include 2020 Olympics and 2022 World Cup". BBC. <https://www.bbc.co.uk/sport/olympics/50710598>

BBFC, 2019. British Board of Film Classification. <https://bbfc.co.uk/>

"Big Brother UK". 2000-2018. TV programme franchise. Channel 4, Channel 5.

Bjørkelo, Kristian A. 2018. "It feels real to me": Transgressive realism in This War of Mine. In: Jørgensen K, Karlsen FK. Transgression in Games and Play. MIT Press 169-186

Bogost, Ian., Ferrari, S. and Schweizer, B. 2010. *Newsgames : journalism at play*. London: MIT Press.

Bogost, Ian. 2007. *Persuasive Games: The Expressive Power of Videogames*. Cambridge, MA: MIT Press. Print.

Bogost, Ian. 2006. *Playing Politics: Videogames for Politics, Activism, and Advocacy*. First Monday. 11. 10.5210/fm.v0i0.1617.

Brown v. Entertainment Merchants Ass'n. 2011. 131 S. Ct. 2729, 564 U. S., 180 L. Ed. 2d 708.

Brathwaite, Brenda., Sharp, John., 2010. 'Chapter 19 The Mechanic Is The Message: A Post Mortem in Progress' Schrier, K. and Gibson, D. 2010. *Ethics and game design: Teaching Values Through Play*. Hershey PA: Information Science Reference.

Bruzzi, Stella. 2006. *New Documentary*. 2nd ed. London: Routledge.

Bull, Anna Cento, and Hans Lauge Hansen. 2016. "On Agonistic Memory". *Memory Studies* 9 (4): 390-404. doi:10.1177/1750698015615935.

Campbell, Colin. 2019. "A game about the child of a Nazi interrogates the complexities of bullying. Polygon." <https://www.polygon.com/2018/6/1/17409850/my-child-lebensborn-review-bullying-game>

Campbell, Colin. 2016. "That Dragon Cancers Co-Creator Gets Tearful After a Game Awards Win". Polygon. <https://www.polygon.com/2016/12/1/13814778/that-dragon-cancers-cocreator-gets-tearful-after-game-awards-win>

CNN. n.d. "PerficientDigitalLabs: Magic Wall" <https://perficientdigitallabs.com/work/cnn>

Clement, Jemaine, Taika Waititi, Chelsea Winstanley, Emanuel Michael, Jonathan Brugh, Cori Gonzalez-Macuer, Stu Rutherford, et al. 2015. *What we do in the shadows*.

Coppola, Francis Ford, John Milius, Marlon Brando, Robert Duvall, Martin Sheen, Frederic Forrest, Albert Hall, et al. 1999. *Apocalypse now*.

Crawley, Dan. 2014. "War Is Hell: How This War Of Mine Drew On Real-Life Survivors For Inspiration". Venturebeat.
<https://venturebeat.com/2014/11/19/this-war-of-mine/>.

de Smale, Stephanie, Martijn J. L. Kors, and Alyea M. Sandovar. 2017. "The Case Of This War Of Mine: A Production Studies Perspective On Moral Game Design". *Games And Culture* August: 1-23.
doi:10.1177/1555412017725996.

Diver, Mike. 2016. "'This War Of Mine' Is An Almost Too Real Game Of Survival Horror". Vice.Com.
https://www.vice.com/en_uk/article/4wma4p/this-war-of-mine-is-an-almost-too-real-game-of-survival-horror-953.

Durant, Toby. 2019. "RealOpinions: Will we ever have true realism in FIFA?" Realsport101. <https://realsport101.com/fifa/realopinions-will-we-ever-get-true-realism-in-fifa-20-pes-2020-juventus-ronaldo-neymar-fortnite-fm-volta-ea-sports-release-date/>

EA, 2018. Fifa: List of Players.
<https://img.fifa.com/image/upload/hzfqyndmnqazczvc5xdb.pdf>

EA Sports. 1993-2019. Fifa series [Multiple]. Extended Play Productions, EA Vancouver, EA Romania.

Ebert, R. 2010. "Video games can never be art". Roger Ebert.
<https://www.rogerebert.com/rogers-journal/video-games-can-never-be-art>

Eilon, Shoshana. 2018. "That Dragon, Cancer: Video Game as an Art Form"
<https://pdfs.semanticscholar.org/7cc1/4eee849b4e203709291db390b6de846bf83d.pdf>

Electronic Arts. 2010. Medal of Honor [Xbox 360]. Los Angeles, CA: Danger Close Games.

Electronic Arts. 2016. Battlefield 1 [Xbox One]. Stockholm, Sweden: EA DICE.

Ehrentraut, Judy., 2013. "Meaningful Play: Anti-Immersive Aesthetics In Video Games"
<http://www.firstpersonscholar.com/meaningful-play/>

Éric Chahi. Amazing Studio. 1998. Heart of Darkness [PS1]. Paris, France. Infogrames Multimedia.

ESA, 2018. "Essential Facts About The Computer Game Industry":
http://www.theesa.com/wp-content/uploads/2018/05/EF2018_FINAL.pdf

Festøy, Elin. 2017. "My Child Lebensborn: A nurture game about emotional survival". Kickstarter. <https://www.kickstarter.com/projects/1071941972/my-child-lebensborn-a-nurture-game-about-emotional>

- Frank, Anders. 2011. "Gaming The Game". *Simulation & Gaming* 43 (1): 118132. doi:10.1177/1046878111408796.
- Flanagan, Mary. and Nissenbaum, Helen. Fay., 2014. *Values at play in digital games*. London ; Cambridge, MA: MIT Press.
- Frasca, Gonzalo., n.d. *Games for Change: September 12th: A Toy World*: <http://www.gamesforchange.org/game/september-12th-a-toy-world/>
- Freeman, N. Cibebe. 2015. [PC]. *Star Maid Games*.
- Full Spectrum Warrior. 2004. [Xbox]. Los Angeles, CA: Pandemic Studios.
- Galloway, Alexander. 2004. *Social Realism in Gaming*. *Game Studies*. 4.
- Hall, Charlie. 2014. "The Warsaw Uprising: How A Forgotten Chapter Of WWII Is Inspiring Polish Game Devs". *Polygon*.
<https://www.polygon.com/2014/7/15/5898507/this-war-of-mine-warsawuprising-wwii-inspiring-game-devs-enemy-front>.
- Harris, Iain. 2018. "The stories that they told us were so moving": The making of *My Child Lebensborn*". *Pocketgamer*.
<https://www.pocketgamer.biz/interview/68422/making-of-my-child-lebensborn/>
- Jayemanne, D. 2017. *Performativity in Art, Literature, and Videogames*. London and New York, Palgrave Macmillan.
- Jayemanne, D. 2019. "Chronotypology: A Comparative Method for Analyzing Game Time". *Games & Culture Online First*.
<https://doi.org/10.1177/1555412019845593>
- Kępa, Marek. 2016. "This War Of Mine Now Features A Controversial Version With Children". *Culture.Pl*. <https://culture.pl/en/article/this-war-of-mine-now-features-a-controversial-version-with-children>.
- Konami. n.d. *Six Days in Fallujah*. [TBA]. Minneapolis, MN: Atomic Games
- Kuchera, Ben. 2019. "Call of Duty: Modern Warfare is a thrill ride that turns you into a monster". *Polygon*.
<https://www.polygon.com/reviews/2019/10/28/20936637/call-of-duty-modern-warfare-review-playstation-pc-xbox-dark>
- "Love Island UK". 2015-2019. TV programme franchise. ITV2
- Machkoveck, Sam. 2016. "That Dragon Cancer: A Game That Wrestles with Grief, Hope, and Faith." <https://arstechnica.com/gaming/2016/01/that-dragoncancer-a-game-that-struggles-with-grief-hope-and-faith/>
- MacMillan., 2013. "Throwing Light Onto the Consequences of Cancer": <https://www.macmillan.org.uk/documents/aboutus/research/researchandevaluationreports/throwinglightontheconsequencesofcanceranditstreatment.pdf>

Maurin, Florent. 2018. "Exploring helplessness in games with Bury Me, My Love" (speech, San Francisco, CA, March, 2018)

Maurin, Florent. 2019. "Platform: Reality-Inspired Games with Florent Maurin" (speech, Dundee, SCT, January, 2019)

Maurin, Florent. 2016. "What Reality-Inspired Games Are". Gamasutra. https://www.gamasutra.com/blogs/FlorentMaurin/20161118/285793/What_realityinspired_games_are.php.

Meer, Alec. 2014. "Wot I Think: This War Of Mine". Rock Paper Shotgun. <https://www.rockpapershotgun.com/2014/11/18/this-war-of-mine-review/>.

Mikkelson, David. 1996. "Did Disney Fake Lemming Deaths for the Nature Documentary 'White Wilderness'?" Snopes. <https://www.snopes.com/fact-check/white-wilderness/>.

Moaveni, Azadeh, 2019. "We must not abandon the women and children of Isis in camps in Syria". The Guardian. <https://www.theguardian.com/commentisfree/2019/nov/27/women-isis-syria-camps-refugees>.

Moore, Michael, Kathleen R. Glynn, Jim Czarnecki, Charles Bishop, Michael Donovan, Charlton Heston, Brian Danitz, Michael McDonough, Kurt Engfehr, and Jeff Gibbs. 2003. *Bowling for Columbine*. [United States]: MGM Home Entertainment.

Maitland, Keith. 2016. *Tower*. [United States]: Go-Valley, ITVS, Kino Lorber

Murray, Jennifer L. 2017. "Mass Media Reporting and Enabling of Mass Shootings." *Cultural Studies ↔ Critical Methodologies* 17, no. 2: 114–24. doi:[10.1177/1532708616679144](https://doi.org/10.1177/1532708616679144).

Musa, Talal. 2019. "FIFA 20: EA Sports lose Juventus rights to PES – and won't be in the game" Realsport101. <https://realsport101.com/fifa/fifa-20-ea-sports-has-just-lost-the-rights-to-juventus-pes2020/>

Myrick, Daniel, Eduardo Sánchez, Gregg Hale, Robin Cowie, Bob Eick, Kevin J. Foxe, Heather Donahue, et al. 1999. *The Blair Witch Project*.

Nichols, Bill. 2001. *Introduction To Documentary*. Bloomington & Indianapolis: Indiana University Press.

Numinous Games. 2016. *That Dragon, Cancer* [PC] De Moines, IA: Numinous Games.

Oliver, M. B., Bowman, N. D., Woolley, J. K., Rogers, R., Sherrick, B. I., & Chung, M.-Y. 2016. Video games as meaningful entertainment experiences. *Psychology of Popular Media Culture*, 5(4), 390–405. <https://doi.org/10.1037/ppm0000066>

Osit, David. Zouhali-Worrall, Malika. Green, Amy. Green, Ryan. Larson, Josh. 2015. *Thank You For Playing*. [United States]: Kinematic Films.

- Owen, Wilfred. 1920. "Dulce Et Decorum Est By Wilfred Owen". *Poetry Foundation*. <https://www.poetryfoundation.org/poems/46560/dulce-et-decorum-est>.
- Parker, Felan. 2018. Roger Ebert and the Games-as-Art Debate. *Cinema Journal*. University of Texas Press, 57(3), 77-100. <https://muse.jhu.edu/article/691992>
- Plante, Chris. 2016. "Lemmings came out 25 years ago today, watch a 6 hour play through." *The Verge*. <https://www.theverge.com/2016/2/14/10953210/lemmings-game-25th-anniversary-ms-dos>
- Pötzsch, H. 2017. Selective Realism: Filtering Experiences of War and Violence in First- and Third-Person Shooters. *Games and Culture*, 12(2), 156–178. <https://doi.org/10.1177/1555412015587802>
- Pittner, F., & Donald, I. 2018. Gaming the heart of darkness. *Arts*, 7(3), [46]. <https://doi.org/10.3390/arts7030046>
- Rawitsch, Don., Heinemann, Bill., and Dillenberger, Paul. 1971. *The Oregon Trail*. Northfield, MN.
- Rice, John. W. 2007. "Assessing Higher Order Thinking In Video Games" *1. of Technology and Teacher Education*. 2007. 15(1), 87-100
- Rivera, Joshua. 2019. "Call of Duty: Modern Warfare: The Kotaku Review." *Kotaku*. <https://kotaku.com/call-of-duty-modern-warfare-the-kotaku-review-1839608593>
- Rivera, Joshua. 2019. "Modern Warfare Demands Your Attention, But It Might Not Deserve It." *Kotaku*. <https://kotaku.com/modern-warfare-demands-your-attention-but-it-might-not-1839365226>
- Rockstar Games. 2018. *Red Dead Redemption 2*. Rockstar Studios.
- Romero, Brenda. 2018. "Train — Brenda Romero". Brenda Romero. <http://brenda.games/train/>.
- Rose, Mike. 2014. "The Inspirational Stories Behind This War Of Mine". *Gamasutra*. https://www.gamasutra.com/view/news/214036/The_inspirational_stories_behind_this_war_of_mine.php.
- Rusch, Doris. 2009. *Mechanisms of the Soul—Tackling the Human Condition in Videogames*.
- Sarepta Studio 2018. *My Child Lebensborn* [Apple] Norway: Sarepta Studio, Teknopilot
- Schildkraut, Jaclyn, and Glenn W. Muschert. 2014. "Media Salience and the Framing of Mass Murder in Schools: A Comparison of the Columbine and Sandy Hook Massacres." *Homicide Studies* 18, no. 1: 23–43. doi:10.1177/1088767913511458.

Searcey, Dionne. 2018. "Why the Chibok girls returned by Boko Haram are still not entirely free". Independent.
https://www.independent.co.uk/news/long_reads/boko-haram-girls-kidnapped-freed-return-nigeria-campus-children-babies-a8307866.html

Sheehan, Jason. 2017. "Reading the Game: This War of Mine". NPR.
<https://www.npr.org/sections/alltechconsidered/2017/12/16/569948674/reading-the-game-this-war-of-mine?t=1549843945890>.

Sony Interactive Entertainment. 2019. Death Stranding. [PS4]. Kojima Productions.

Sony Interactive Entertainment Europe. 2014. The Last of Us. [PS4]. Naughty Dog.

Sony Interactive Entertainment Europe. 2020. The Last of Us II. [PS4]. Naughty Dog.

Soullier, Lucie. 2015. "Le Voyage d'une migrante Syrienne a Travers son fil Whatsapp." In *Le Monde*.
https://www.lemonde.fr/international/visuel/2015/12/18/dans-le-telephone-dune-migrante-syrienne_4834834_3210.html#/

Stuever, Hank. 2017. "'Tower' is a well-crafted documentary that deliberately leaves out a major detail" Washington Post.
https://www.washingtonpost.com/entertainment/tv/tower-is-a-well-crafted-documentary-that-deliberately-leaves-out-a-major-detail/2017/02/13/d3f5433a-eef5-11e6-9662-6eedf1627882_story.html

Takahashi, Dean. 2019. "Why Call of Duty: Modern Warfare has torture, child combat and shooting unarmed women". Venturebeat.
<https://venturebeat.com/2019/10/25/why-call-of-duty-modern-warfare-has-torture-child-combat-and-shooting-unarmed-women/>

The Charles Chaplin Film Corporation. 1997. *The Great Dictator*. [New York, N.Y.]:[Jewish Media Fund].

The Pixel Hunt. 2017. Bury Me, My Love [Android] France: Playdius Entertainment

"This Game Is (Gets) Too Easy.: This War Of Mine General Discussions". 2019.
Steam Community.
<https://steamcommunity.com/app/282070/discussions/0/617320168125489899>

This War of Mine. 2019. Steam.
https://store.steampowered.com/app/282070/This_War_of_Mine/. THQ. 2004.

Tilles, Daniel. 2020. "Poland Puts Computer Game "This War of Mine" On School Reading List". Notes from Poland.

<https://notesfrompoland.com/2020/06/18/poland-puts-computer-game-this-war-of-mine-on-school-reading-list/>

Totilo, Stephen. 2014. "The Making Of A Very Different Kind Of War Video Game". Kotaku. <https://kotaku.com/the-making-of-a-very-different-kind-ofwar-video-game-1560735762>.

Traffic Software. 2004. JFK Reloaded. [PC] Scotland: Traffic Software

Dorn, Aaron van. 2015. "Thank You For Playing." *The Lancet. Oncology* 16 6: 615 .

VSC. 2019. Video Standards Council Rating Board. <https://videostandards.org.uk/RatingBoard/>

Webber, Jordan. 2016. "This War Of Mine: Little Ones – Bringing Children Into A War Simulation". The Guardian. <https://www.theguardian.com/technology/2016/mar/04/this-war-of-mine-littleones-children-11-bit-studios>.

Whitson, Jennifer R, Bart Simon, and Felan Parker. 2018. "The Missing Producer: Rethinking Indie Cultural Production in Terms of Entrepreneurship, Relational Labour, and Sustainability." *European Journal of Cultural Studies*, doi:[10.1177/1367549418810082](https://doi.org/10.1177/1367549418810082).

"Wife Swap UK". 2003-2017. TV programme franchise. Channel 4.

U.S. Army . 2002. America's Army [PC]. Washington, DC: Author.